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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,564	04/10/2001	Ralf Schaefer	450117-03193	7746
20999	7590	07/08/2004	EXAMINER	
FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151			PATEL, ASHOKKUMAR B	
			ART UNIT	PAPER NUMBER
			2154	

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/829,564	SCHAEFER ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Ashok B. Patel	2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-25 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-25 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All    b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____.   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/10/2001</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## **DETAILED ACTION**

1. Application Number 09/829, 564 was filed on 04/10/2001. Claims 1-25 are subject to examination.

### ***Specification***

2. The disclosure is objected to because of the following informalities:
  - a. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

- b. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### ***Arrangement of the Specification***

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC  
(See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING (S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Regarding claim 6, the phrase "for example" (e.g.) renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). For the purpose of this office action the phrase was ignored.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2, 22-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Rinne (US 6, 549, 753).

**Referring to claim 1,**

The reference teaches a method to transmit an information service in a broadcast transmission system (Abstract, col.1, lines 8-13), characterized by the following steps:

performing a fragmentation within each of categories representing said information service to create data fragments (col.1, lines 46-53, lines 54-57), adding signalling information to every data fragment (col.1, lines 59-65), which signalling information allows a consistent reassembly of said data fragments at a receiver on basis of predefined protocol rules, to create respective broadcast objects, and transmitting said broadcast objects in an order according to an information content of said data fragment within said broadcast object. (col.2, lines 15-53).

**Referring to claim 2,**

The reference teaches the method according to claim 1, characterized in that said fragmentation is performed dependent on the information content of the data to be transmitted. (col.1, lines 46-53, lines 54-57, col.2, lines 24-28).

**Referring to claim 22,**

The reference teaches broadcast transmission system is DAB (col.1, lines 54-67 and col.2, lines 1-12).

**Referring to claims 23 and 24,**

The reference teaches a method to receive an information service in a broadcast transmission system, characterized by the following steps:  
receiving broadcast objects; extracting signalling information and a data fragment of every received broadcast object, which signalling information allows a consistent reassembly of said data fragments into an information category of said information service on basis of predefined protocol rules; and performing a defragmentation within each of categories representing said information service to create said information service, in that said defragmentation is performed dependent on the information content of the data to be transmitted.(col.4, lines 46-65)

**Referring to claim 25,**

Claim 25 is a claim to a receiver for the method to receive an information service in a broadcast transmission system of claim 23. Therefore, claim 25 is rejected for the reasons set forth for claim 23.

**Claim Rejections - 35 USC § 103**

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rinne (US 6, 549, 753) in view of Steele et al. (hereinafter Steele) (Pub. No. US 2002/0046084)

**Referring to claim 3,**

Keeping in mind the teachings of the reference Rinne, managing signaling in broadcast transmission system such as DAB, as stated above, the reference fails to teach that a broadcast object is classified in dependency on the information content of the data fragment carried within a broadcast object, and a repetition rate of transmitting a broadcast object is dependent on its type. The reference Steele teaches broadcasting "The plurality of service or product options could include such things as location based services (roadside assistance, navigation, etc.), news updates, sports, weather, stock quotes, e-commerce transactions, web surfing minutes, discounts on products, frequent flier miles, free products (CD's, electronic equipment, gasoline), etc. in exchange for the end user receiving ads (voice, text or other medium) to a communication device." (page 6, [para.0110]). Also, as depicted in Fig. 5 of the reference, the reference clearly teaches that each broadcast object is classified in dependency on the information

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content of the data fragment carried within a broadcast object, and a repetition rate of transmitting a broadcast object is dependent on its type, such as weather, sports, news stocks. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to enhance Rinne by applying the classification technique of Steele to the broadcast object, as depicted in Fig.5, in dependency on the information content of the data fragment carried within a broadcast object, since this allows any AM, FM, TV, or digital audio broadcast or any internet audio broadcast to be easily selected by format as taught by Steele.

**Referring to claim 4,**

Keeping in mind the teachings of the reference Rinne, managing signaling in broadcast transmission system such as DAB, as stated above, the reference fails to teach that information service comprises a structure with three layers, namely service which provides information considered useful for a user when choosing a service among several others; category which links several items: and item which carries the information the user is interested in. The reference Steele teaches broadcasting "The plurality of service or product options could include such things as location based services (roadside assistance, navigation, etc.), news updates, sports, weather, stock quotes, e-commerce transactions, web surfing minutes, discounts on products, frequent flier miles, free products (CD's, electronic equipment, gasoline), etc. in exchange for the end user receiving ads (voice, text or other medium) to a communication device." (page 6, [para.0110]). Also, as depicted in Fig. 5 of the reference, the reference clearly teaches that the information service comprises a structure with three layers, namely

service which provides information considered useful for a user when choosing a service among several others (Fig.5, elements namely :Music, Talk, TV, Directory, Information); category which links several items (Fig.5, elements namely :Rock, Jazz, Country, weather) and item which carries the information the user is interested in (Fig.5, elements namely: Phoenix, Chicago). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to enhance Rinne by applying the classification technique of Steele to the broadcast object, as depicted in Fig.5, in dependency on the information content of the data fragment carried within a broadcast object, since this allows any AM, FM, TV, or digital audio broadcast or any internet audio broadcast to be easily selected by format as taught by Steele.

**Referring to claims 5 and 6,**

Keeping in mind the teachings of the reference Rinne, managing signaling in broadcast transmission system such as DAB, as stated above, the reference fails to teach that said fragmentation divides a category horizontally in at least two groups by building groups of item attributes of items of said category according to an importance of said item attributes, and in that four groups of item attributes are build, namely: a core attributes group which covers a set of the most important attributes, which should be available in a terminal first on average; a dynamic attributes group which are likely to change with a higher frequency than other attributes; a main attributes group which covers all remaining item attributes; and a referenced attributes group which consists of attributes belonging to one of the other three attribute groups which are included therein as reference only and to be transmitted separately, e.g. because they comprise a high

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amount of data. The reference Steele teaches broadcasting "The plurality of service or product options could include such things as location based services (roadside assistance, navigation, etc.), news updates, sports, weather, stock quotes, e-commerce transactions, web surfing minutes, discounts on products, frequent flier miles, free products (CD's, electronic equipment, gasoline), etc. in exchange for the end user receiving ads (voice, text or other medium) to a communication device." (page 6, [para.0110]). Also, as depicted in Fig. 5 of the reference, the reference clearly teaches that fragmentation divides a category horizontally in at least two groups, namely Weather and Phoenix, Chicago and Honolulu. By referring to Fig.5, the reference clearly teaches the inherent four groups of item attributes such as Weather location as being Phoenix (a core attributes group which covers a set of the most important attributes, which should be available in a terminal first on average;); the data is repetitively transmitted as the weather data changes (a dynamic attributes group which are likely to change with a higher frequency than other attributes;) any other related information such as emergency contact phone numbers of local police (a main attributes group which covers all remaining item attributes), the data attribute allowing the weather report audio stream on audio channel (and a referenced attributes group which consists of attributes belonging to one of the other three attribute groups which are included therein as reference only and to be transmitted separately, e.g. because they comprise a high amount of data.) Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to enhance Rinne by applying the classification technique of Steele to the broadcast object, as depicted in Fig.5, in

dependency on the information content of the data fragment carried within a broadcast object, since this allows any AM, FM, TV, or digital audio broadcast or any internet audio broadcast to be easily selected by format as taught by Steele.

**Referring to claims 7 and 8,**

Keeping in mind the teachings of the reference Rinne, managing signaling in broadcast transmission system such as DAB, as stated above, the reference fails to teach said fragmentation divides at least parts of a category vertically by building groups of items of said category according to a logical membership of said items and that two types of broad cast objects are defined, namely: item subset directory containing information about all items which are transmitted in a predefined format; and item subset containing item data of a predefined format. The reference Steele teaches broadcasting "The plurality of service or product options could include such things as location based services (roadside assistance, navigation, etc.), news updates, sports, weather, stock quotes, e-commerce transactions, web surfing minutes, discounts on products, frequent flier miles, free products (CD's, electronic equipment, gasoline), etc. in exchange for the end user receiving ads (voice, text or other medium) to a communication device." (page 6, [para.0110]). Also, as depicted in Fig. 5 of the reference, the reference clearly teaches that fragmentation divides at least parts of a category vertically by building groups of items of said category according to a logical membership of said items (Fig.5, elements namely: Rock and Jazz) and that two types of broad cast objects are defined, namely: item subset directory containing information about all items which are transmitted in a predefined format; and item subset containing item data of a predefined

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format. (Fig.5, elements namely: WINS, WNEW and KSAN and WORL and so on.)

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to enhance Rinne by applying the classification technique of Steele to the broadcast object, as depicted in Fig.5, in dependency on the information content of the data fragment carried within a broadcast object, since this allows any AM, FM, TV, or digital audio broadcast or any internet audio broadcast to be easily selected by format as taught by Steele.

**Referring to claims 9 and 10,**

Keeping in mind the teachings of the reference Rinne, managing signaling in broadcast transmission system such as DAB, as stated above, the reference fails to teach that that six types of broadcast objects are defined, namely: service directory containing elementary information about a service; category directory containing a compete list of all categories within a service; item directory containing all core attributes of all items of a category; item dynamic data list containing the dynamic attributes of at least a group of items; item main data list containing the main attributes of at least a group of items; and referenced attributes containing one referenced attribute of one item, and that the signalling information of a service directory broadcast object comprises a protocol version attribute to enable a receiving terminal to check protocol compatibility between the broadcast service and a processing unit in the terminal. The reference Steele teaches broadcasting "The plurality of service or product options could include such things as location based services (roadside assistance, navigation, etc.), news updates, sports, weather, stock quotes, e-commerce transactions, web surfing minutes,

discounts on products, frequent flier miles, free products (CD's, electronic equipment, gasoline), etc. in exchange for the end user receiving ads (voice, text or other medium) to a communication device." (page 6, [para.0110]). Also, as depicted in Fig. 5 of the reference, the reference clearly teaches six types of broadcast objects are defined, namely: service directory containing elementary information about a service (Fig.5, element namely Information); category directory containing a compete list of all categories within a service (Weather and Stocks) ; item directory containing all core attributes of all items of a category (Phoenix, Chicago and so on.) ; item dynamic data list containing the dynamic attributes of at least a group of items (inherent characteristic of the item Phoenix weather) ; item main data list containing the main attributes of at least a group of items(inherent characteristic of the item Phoenix such as any other related information such as emergency contact phone numbers of local police); and referenced attributes containing one referenced attribute of one item (the data attribute allowing the weather report audio stream on audio channel). The reference also teaches "The two types of channels preferably available are audio broadcasts (e.g., AM, FM, TV, digital, Internet audio broadcasts and recorded material) and personal information services (e.g., navigation, email, traffic alerts, etc.). Channels are organized in a hierarchy 158 so any one can be easily selected on screen (see FIG. 2).( the signalling information of a service directory broadcast object comprises a protocol version attribute to enable a receiving terminal to check protocol compatibility between the broadcast service and a processing unit in the terminal.). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to

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enhance Rinne by applying the classification technique of Steele to the broadcast object, as depicted in Fig.5, in dependency on the information content of the data fragment carried within a broadcast object, since this allows any AM, FM, TV, or digital audio broadcast or any internet audio broadcast to be easily selected by format as taught by Steele.

**Referring to claims 11, 12 and 13,**

The reference Rinne teaches “The DAB system is used for the transmission of various services. The services may be e.g. audio or data services. The services may be transmitted e.g. across a fixed PSTN network (Public Switched Telephone Network) and a radio channel to a mobile receiver, for example, in broadcast mode. For efficient transmission of various services, the DAB system has to use efficient data management and signalling methods.” (col.1, lines 46-53). The reference teaches a method the signalling is placed in a signal to be transmitted on the basis of control information that is separate from the data, the control information being used for managing the signalling. (col.2, lines 20-24). The reference specifically fails to specifically teach that the signalling information of a broadcast object comprises a type attribute indicating a classification of said broadcast object, and/or an ID attribute to distinguish several broadcast objects of a same type of broadcast objects, and/or a version attribute to indicate a change of a certain broadcast object, and that a reference to a referenced attribute comprises the ID of the broadcast object carrying the referenced attribute and a version attribute of the referenced broadcast object, and that in case of an update of a referenced attribute the version attribute of the referenced attribute object and the

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version of the attribute reference change, or the reference changes by exchanging the identifier and using the version information of the newly referenced attribute. The reference Steele teaches broadcasting "The plurality of service or product options could include such things as location based services (roadside assistance, navigation, etc.), news updates, sports, weather, stock quotes, e-commerce transactions, web surfing minutes, discounts on products, frequent flier miles, free products (CD's, electronic equipment, gasoline), etc. in exchange for the end user receiving ads (voice, text or other medium) to a communication device." (page 6, [para.0110]). Also, as depicted in Fig. 5 of the reference, the reference clearly teaches that the broadcast object comprises a type attribute indicating a classification of said broadcast object, (Fig. 5, element namely: Weather) and/or an ID attribute to distinguish several broadcast objects of a same type of broadcast objects, (Fig.5, element namely: Phoenix, Chicago) and/or a version attribute to indicate a change of a certain broadcast object (inherent to the weather information category (broadcast object) as these services are provided based on the location.) The reference also teaches that a reference to a referenced attribute comprises the ID of the broadcast object carrying the referenced attribute (Fig.5, element namely: Weather)and a version attribute of the referenced broadcast object (inherent to the weather information category (broadcast object) as these services are provided based on the location.) and that in case of an update of a referenced attribute the version attribute of the referenced attribute object and the version of the attribute reference change, or the reference changes by exchanging the identifier and using the version information of the newly referenced attribute (inherent to

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the weather information category (broadcast object) as these services are provided based on the location.). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to enhance Rinne by applying the classification technique of Steele to the broadcast object, as depicted in Fig.5, in dependency on the information content of the data fragment carried within a broadcast object, since this allows any AM, FM, TV, or digital audio broadcast or any internet audio broadcast to be easily selected by format as taught by Steele.

**Referring claims 14 and 15,**

Keeping in mind the teachings of the reference Rinne, managing signaling in broadcast transmission system such as DAB, as stated above, the reference fails to teach that the item core attributes group, the item main attributes group and the item dynamic attributes group each comprise an own version attribute which indicates an information update whenever an item attribute value or an item attribute cardinality of the respective item attributes group changes and that a broadcast object comprising an item of the item core attributes group and of the item directory carries all three version attributes, a broadcast object comprising an item of the item main attributes group carries a main version attribute, and a broadcast object comprising an item of the item dynamic attributes group carries a dynamic version attribute. The reference Steele teaches broadcasting "The plurality of service or product options could include such things as location based services (roadside assistance, navigation, etc.), news updates, sports, weather, stock quotes, e-commerce transactions, web surfing minutes, discounts on products, frequent flier miles, free products (CD's, electronic equipment, gasoline), etc.

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in exchange for the end user receiving ads (voice, text or other medium) to a communication device." (page 6, [para.0110]). Also, as depicted in Fig. 5 of the reference, the reference clearly teaches that the item core attributes group (Fig.5, element namely: Phoenix), the item main attributes group and the item dynamic attributes group each comprise an own version attribute which indicates an information update whenever an item attribute value or an item attribute cardinality of the respective item attributes group changes (this characteristic is inherent to the weather information (broadcast object) category as these services are provided based on the location.), and that a broadcast object comprising an item of the item core attributes group (Fig.5, elements namely: Phoenix, Chicago, Honolulu) and of the item directory carries all three version attributes, a broadcast object comprising an item of the item main attributes group carries a main version attribute, and a broadcast object comprising an item of the item dynamic attributes group carries a dynamic version attribute. (these characteristics are inherent to the weather information category (broadcast object) as these services are provided based on the location.) Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to enhance Rinne by applying the classification technique of Steele to the broadcast object, as depicted in Fig.5, in dependency on the information content of the data fragment carried within a broadcast object, since this allows any AM, FM, TV, or digital audio broadcast or any internet audio broadcast to be easily selected by format as taught by Steele.

**Referring to claims 16, 17, 18, 19 and 20,**

Keeping in mind the teachings of the reference Rinne, managing signaling in broadcast transmission system such as DAB, as stated above, the reference fails to teach that the item directory comprises a version attribute which indicates an update whenever an item set comprising all core attributes of all items of a category changes or the vertical fragmentation changes, and that the item main data list and the item dynamic data list respectively comprise a version attribute which indicates an update whenever a respective item subset comprising the respective main or dynamic attributes of at least a group of items changes or the vertical fragmentation changes, and that the category directory comprises a version attribute which indicates an update whenever a category directory attribute value or a category attribute cardinality changes, and that the category directory comprises a version attribute which indicates an update whenever a category set comprising a compete list of all categories within a service changes, and that the service directory comprises a version attribute which indicates an update whenever the protocol version attribute or a service attribute changes. The reference Steele teaches broadcasting "The plurality of service or product options could include such things as location based services (roadside assistance, navigation, etc.), news updates, sports, weather, stock quotes, e-commerce transactions, web surfing minutes, discounts on products, frequent flier miles, free products (CD's, electronic equipment, gasoline), etc. in exchange for the end user receiving ads (voice, text or other medium) to a communication device." (page 6, [para.0110]). Also, as depicted in Fig. 5, the reference teaches the availability of category of services such as weather and the services that are location based which are updated by onboard global

positioning.(Abstract). Thereby, it is the inherent characteristic of the system taught by the reference Steele that any change in services and relevant attributes are depicted. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to enhance Rinne by applying the classification technique of Steele to the broadcast object, as depicted in Fig.5, in dependency on the information content of the data fragment carried within a broadcast object, since this allows any AM, FM, TV, or digital audio broadcast or any internet audio broadcast to be easily selected by format as taught by Steele.

**Referring to claim 21,**

The reference Rinne teaches “The DAB system is used for the transmission of various services. The services may be e.g. audio or data services. The services may be transmitted e.g. across a fixed PSTN network (Public Switched Telephone Network) and a radio channel to a mobile receiver, for example, in broadcast mode. For efficient transmission of various services, the DAB system has to use efficient data management and signalling methods.” (col.1, lines 46-53). The reference teaches a method the signalling is placed in a signal to be transmitted on the basis of control information that is separate from the data, the control information being used for managing the signalling. (col.2, lines 20-24). The reference specifically fails to specifically teach that the signalling information of a broadcast object carrying a fragment of a category comprises a category ID attribute which specifies uniquely an information category and attributes which allow the defragmentation of the category. The reference Steele teaches broadcasting “The plurality of service or product options could include such

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things as location based services (roadside assistance, navigation, etc.), news updates, sports, weather, stock quotes, e-commerce transactions, web surfing minutes, discounts on products, frequent flier miles, free products (CD's, electronic equipment, gasoline), etc. in exchange for the end user receiving ads (voice, text or other medium) to a communication device." (page 6, [para.0110]). Also, as depicted in Fig. 5 of the reference, the reference clearly teaches that the signalling information of a broadcast object carrying a fragment of a category comprises a category ID attribute which specifies uniquely an information category and attributes which allow the defragmentation of the category. (Fig.5, element Information). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to enhance Rinne by applying the classification technique of Steele to the broadcast object, as depicted in Fig.5, in dependency on the information content of the data fragment carried within a broadcast object, since this allows any AM, FM, TV, or digital audio broadcast or any internet audio broadcast to be easily selected by format as taught by Steele.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok B. Patel whose telephone number is (703) 305-2655. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (703) 305-8498. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abp

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JOHN FOLLANSBEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100